EDITORIAL COMMENT

This department of California and Western Medicine presents editorial comment by contributing members on items of medical progress, science and practice, and on topics from recent medical books or journals. An invitation is extended to every member of the California and Nevada Medical Associations to submit brief editorial discussions suitable for publication in this department. No presentation should be over five hundred words in length.

Homeopathy and the Landsteiner Phenomenon.—One could paraphrase the familiar *"similia similibus curantur"* of Hahnemann by the postulate that, in proper doses, "each and every symptom-producing drug acts as a heterophile, symptom-specific vaccine, increasing personal resistance to each and every pathogenic factor of the same symptom-specific group."

Thus far, American immunologists have shown no interest in this early Victorian prototype of their logic, due to the fact that they have failed to obtain convincing experimental evidence that noncolloidal pharmacodynamic agents are demonstrably antigenic. The recent development of new immunologic techniques by means of which numerous simple noncolloids are apparently raised to full antigenicity, however, may conceivably broaden the field of modern immunological research to include numerous pharmacodynamic crystalloids. These crystalloid techniques arose from the well-confirmed observations by Landsteiner and his colleagues [1] that numerous apparently nonantigenic crystalloids (*e. g.*, phenylacetic acid) may acquire demonstrable humoral antigenic powers, if united chemically with a protein "carrier." The protein-crystalloid complex injected into laboratory animals leads to the development of a duplex antiserum, one part of which acts as a crystalloid-specific fractional precipitin (or precipitin variant). With this "fractional antibody," the crystalloid can be identified either in the free state or when combined with a protein "carrier." This identification is made with the same ease and certainty that *B. typhosus* can be differentiated from the colon bacillus.

The suggested application of the Landsteiner conjugation technique to a serological verification of the basic tenet of homeopathy is, of course, but one of the numerous, apparently feasible, clinical applications of the new "crystalloid immunology."

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Control of Diuresis Through Narcotics.—It was pointed out in 1886 by von Schroeder that morphin opposed caffein diuresis in animals, but little attention was given to the subject of the control of urinary formation by centrally acting drugs until interest was revived by E. B. Pick and his collaborators in Vienna less than a decade ago. The Viennese pharmacologist noted that merely restraining unanesthetized animals markedly decreased diuresis produced by water, but that if such animals were decerebrated, and allowed to recover from the operation, water diuresis was not altered by handling of the animal. This led them to test out various depressants of the central nervous system, with the discovery,[1] confined by Godlowski [2] and very recently by Nyary,[3] that paraldehyd and chloral hydrate augment water diuresis, while phenobarbital (luminal) and chorbutanol (chloretone) oppose the diuresis. Barbital has an intermediate effect. Nyary has demonstrated further a paradoxical effect of phenobarbital in that it favors, rather than opposes caffein diuresis. Bonsman [4] and Fee [5] have confirmed the early observations of von Schroeder regarding morphin.

From his experiments with normal and decerebrated animals, Pick concludes that diuresis is controlled by a subcortical center located probably in the hypothalamus. With this assumption, he can divide narcotic drugs into those acting on the cerebral cortex, to remove inhibition of the diuretic center (paraldehyd, chloral hydrate) and those affecting the brain stem (phenobarbital, chorbutanol). Such a classification is not new, but it still lacks the sufficient support for its general acceptance.

The subject has important practical implications which should be tested out extensively. We are in almost complete ignorance of the effect of these drugs upon diuresis in the human. It is not infrequent that morphin is administered to patients undergoing treatment with diuretic drugs, as in cardiac edemas, yet we have practically no accurate information as to whether the morphin antagonizes the effect of the diuretic. The possibility that strychnin, atropin and phenobarbital, as used in the treatment of enuresis, may affect urine formation, as well as bladder control, is suggested by the experiments of the Viennese workers. The whole subject is a field wide open for clinical investigation.

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1 Landsteiner, K., and van der Scheer, J.: J. Exper. Med., 48:315 (Sept.), 1928; 54:295 (Sept.), 1931.

1 Molitor, H., and Pick, E. P.: Biochem. Zeit. 186:130, 1927.

2 Godlowski, W. J.: Arch. Exp. Path. Pharm., 156:85, 1930.

3 von Nyary, A.: Arch. Exp. Path. Pharm., 162:565, 1931.

4 Bonsman, M. R.: Arch. Exp. Path. Pharm., 156:160, 1930.

5 Fee, A. R.: Jour. Physiol., 68:39, 1929.